L 38416-66

ACC NR: AP6019922

tion from hypophosphite baths, it is possible to recommend 400C as the optimum temperature of heat treatment, reached by slow heating. The heat treatment is carried out without keeping this temperature. Under these conditions, minimum adverse phenomena occur. Orig. art. refers to and lists the captions of 10 figures, however reproduces only 3. [KS]
[Based on authors' abstract.]

SUB CODE: 11/ SUBM DATE: 03Jul65/ ORIG REF: 007/ SOV REF: 001/
OTH REF: 004

Card 2/2

GRENAR, Antonin; HERMANSKY, Vojtech; STEFEK, Vojtech

Use of polystyrene replicas for the study of structures and surface formations by a polarizing microscope for transmitted light. Silikaty 8 no.3:224-230 '64.

1. Institute of Mineral Raw Materials, Kutna Hora (Grenar).
2. Research Institute of Electrotechnical Ceramics, Hradec Kralove (for Hermansky and Stefek).

HERMASZEWSKI, W.

Causes of illusions in instrument flying. p. 21.

WOJSKOWY PRZEGLAD LOTNICZY. (Dowodztwo Wojsk Lotniczych) Warszawa, Poland.
Vol. 12, no. 3, Mar. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, no. 7, July 1959.

Uncl.

HERMELINOWA-LAZICKA, A.

HERMELINOWA-LAZICKA, A.

Blood proteins in chronic arthritis. Polskie arch. med. wewnetrz. 24 no.3a:465-473 1954.

(ARTHRITIS, RHEUMATOID, blood in, *proteins)

(BLOOD PROTEINS, in various diseases, *rheum. arthritis)

HERMELINOWA-LAZICKA, Anna; LUCIAK, Mieczyslaw

A peculiar reaction of the connective tissue during the course of septicemia in a small child. Pediat. polska 35 no.7:805-810 Jl '60.

1. Z Kliniki Pediatrycznej Slaskiej A.M. w Zabrzu Kierownik: prof. dr med. A.Chwalibogowski i z Zakladu Anatomii Patologicznej Slaskiej A.M. w Zabrzu Kierownik: prof. dr med. W.Niepolomski.
(SEPTICEMIA pathol)
(CONNECTIVE TISSUE pathol)

HERMELINOWA-LAZICKA, Anna; NOWAK, Stanislaw

A case of disgerminoma in an 11-year-old girl. Pediat.polska 35 no.11:1357-1362 N '60.

1. Z Kliniki Chorob Dzieci Slaskiej A.M. w Zabrzu, Kierownik: prof.dr med. A.Chwalibogowski i z I Kliniki Chirurgicznej Slaskiej A.M., Kierownik: doc. dr med. S.Szyszko.
(DISGERMINOMA in inf & child)

HERMELINOWA-LAZICKA, Anna

Biochemical properties of staphylococci isolated from the ear in otitis media and from the nasopharyngeal cavity in other diseases in children. Polski tygod. lek. 15 no.46:1762-1766 14 N '60.

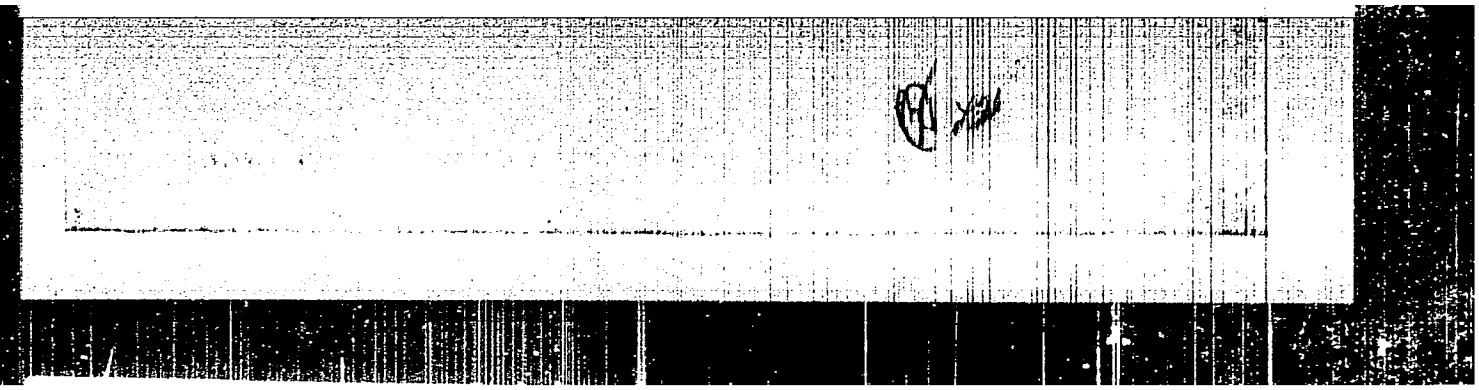
1. Z Kliniki Chorob Dzieci Sl. A.M. w Zabrzu; kierownik: prof. dr med. Artur Chwalibogowski.

(OTITIS MEDIA microbiol) (NASOPHARYNX microbiol)
(STAPHYLOCOCCUS culture)

HERMELINOWA, Anna

Results of the treatment of pleural abscesses in children; biochemical tests and antibiotic resistance. Przegl. lek. 21 no.6:420-423 '65.

1. Z Kliniki Pediatrycznej Slaskiej AM w Zabrzu (Kierownik: Prof. dr. med. A. Chwalibogowski [deceased]).



APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618010019-5"

Hermoch, V.

CZECH

6640. The erosive effects of transient arcs in an electrolytic medium. V. HERMOCH. *Czech. J. Phys.*, 3, No. 3, 232–9 (1953) *In Russian.* *Summary* (1 p.) *in English.*

537.523.4

An experimental study of the erosion rates in sparks with different current pulse shapes (condensed discharges and rectangular pulse discharges). Various metals are used for electrodes, and the sparks are immersed in electrolytes. There is some discussion of electrode erosion mechanisms, and electrolytic surface layer effects.

J. D. CRAGGS

HERMOCH, V.

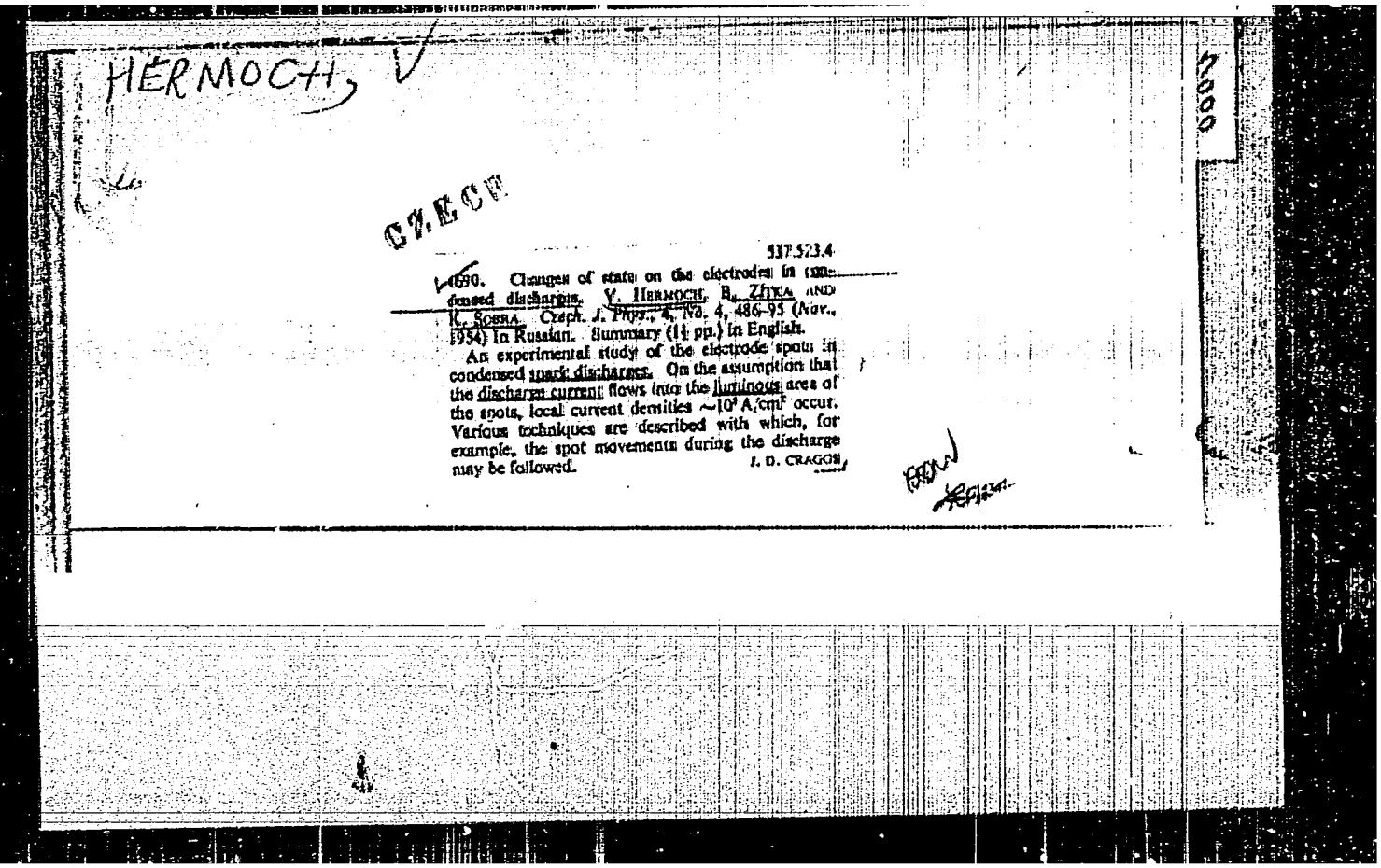
"Effect of a Nonconducting Layer Covering the Surface of Electrodes on the Course of the Condensed Electric Arc" P. 28
(CESKOSLOVENSKY CASOPIS PRO FYSIKU Vol. 4, No. 1, Feb. 1954 - Praha, Czech.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol, 4, No. 4, April 1955, Uncl.

HERMOCH, V.; [illegible], R.; [illegible], K.

"Changes of the State of Electrodes in Condensed Discharge." p. 305,
(CESKOSLOVENSKA CASOPIS PRO FYSIKY, Vol. 4, No. 3, June 1954, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4
No. 5, May 1955, Uncl.



HERMOCH, V

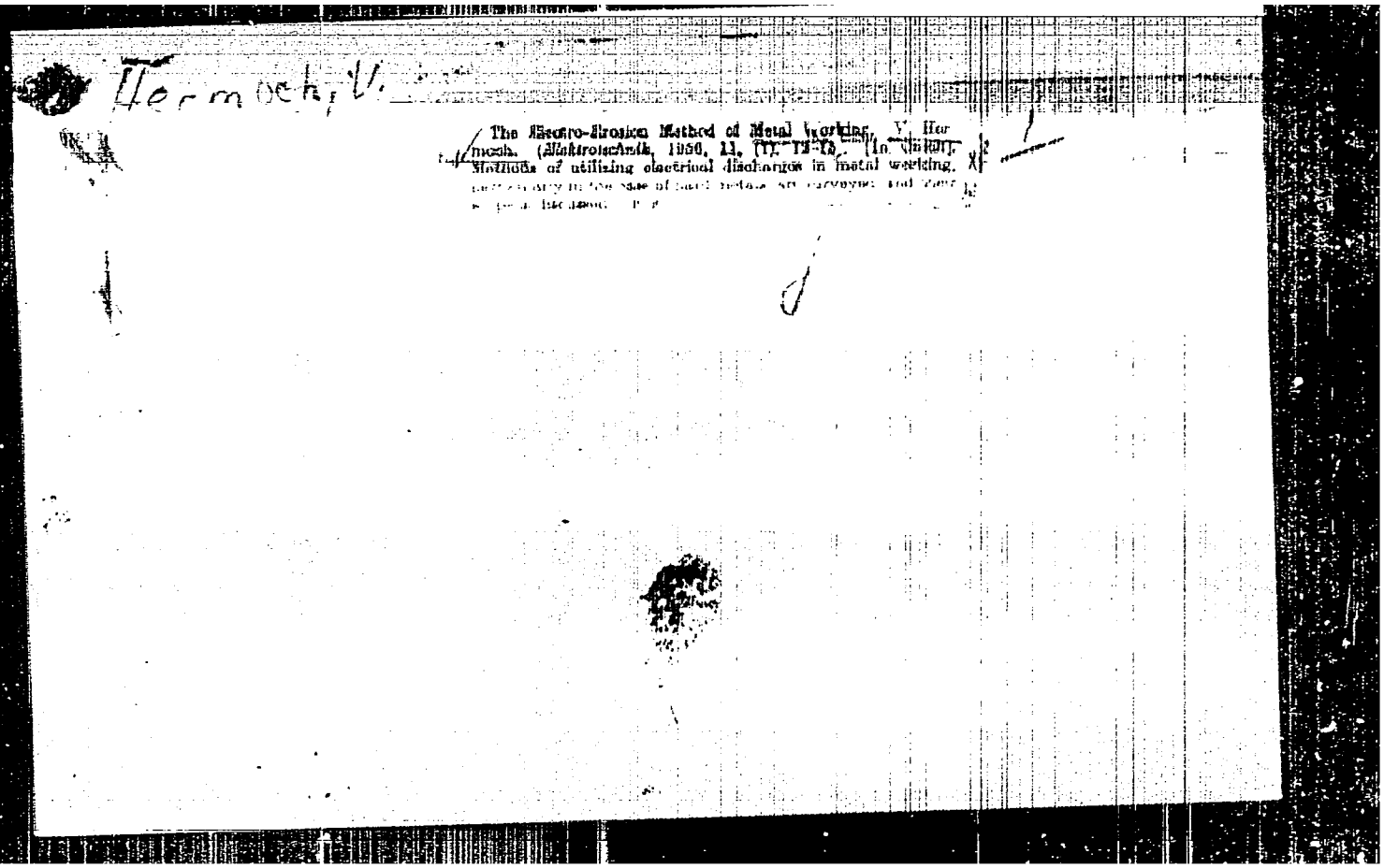
CZECH

7000

537.523.4

4690. Changes of state on the electrodes in condensed discharges. V. HERMOCH, B. ZHYKA AND K. SOBRA. Czech. J. Phys., 4, No. 4, 486–95 (Nov., 1954) In Russian. Summary (1½ pp.) in English.

An experimental study of the electrode spots in condensed spark discharges. On the assumption that the discharge current flows into the luminous area of the spots, local current densities $\sim 10^5$ A/cm^2 occur. Various techniques are described with which, for example, the spot movements during the discharge may be followed. J. D. CRAGGS



Hermech, V.

The Electro-Erosion Method of Metal Working. V. Hermech. (Elektrotechnik, 1956, 11, [1], 13-15. In Polish.) Methods of utilising electrical discharges in metal working.

HERMOCH, V.

SCIENCE

Periodicals: CESKOSLOVENSKY CASOPIS PRO FYSIKU. Vol. 8, No. 5, 1958

HERMOCH, V. Contribution to the study of electrode areas of high-voltage electric of short duration. p.534.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 5, May 1959, Unclass.

CZECH/37-58-6-9/30

AUTHOR: Hermoch, Vladimír

TITLE: Ejection of Vapour from the Electrode Material in the Case of Short-duration Heavy Current Electrical Discharge (Vytrysky par materiálu elektrod krátkodobého silnoproudého elektrického výboje)

PERIODICAL: Československý Časopis Pro Fysiku, 1958, Nr 6, pp 680 - 689 + 2 plates (Czech)

ABSTRACT: It is obvious from published results of various authors that the flow in front of the electrodes in the case of high current intensity discharges is a general phenomenon for which so far no agreed expression has been given. In earlier work (Ref 24) the author has shown that for elucidating the phenomena in electrode regions of a heavy current discharge, it is necessary, in addition to other factors, to know in detail the mechanism of evolution of vapours from the electrodes engaged in the discharge. In this paper, the results are given of measuring the speeds of the evolved vapours and the influence is analysed of the evaporation on the discharge parameters. The test arrangement consisted of a spark gap, one of the electrodes was covered by an insulation plate with a hole through which the discharge passed and was

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Ejection of Vapour from the Electrode Material in the Case of a Short-duration Heavy Current Electrical Discharge

thus localised on the electrode surface, Figure 1, p 681. This enabled investigating the evolution of vapours of the electrode material under various conditions and analysing the mechanism of their formation. The results are tabulated and graphed. Some of the obtained photographs are reproduced. The thermal nature of the ejections, i.e. their formation as a result of evaporation of the electrodes, follows not only from the energy equilibrium for the surface of the electrode but also from the dependence of the speed on the quantity of the evaporated electrode material. It was established that the vapours are not ejected continuously but discretely, and the speed of their motion is of the order of 10^5 cm/sec. The speeds of these individual ejections during the discharge vary little and they are inversely proportional to the instantaneous quantity of the formed vapours and directly proportional to the energy liberated in the direct neighbourhood of the electrodes. This expresses their dependence on the electrode material; if the electrode material remains the same, the speed depends

Ejection of Vapour from the Electrode Material in the Case of a Short-duration Heavy Current Electrical Discharge

on the conditions of the electrodes, e.g. current density and, for instance, in the case of localisation, also on the depth of the hole in the plate. The existence of severalareas with differing pressure conditions which can be clearly observed during the outflow of the vapours from the "nozzle" (hole) is confirmed by the fact that they were also observed on electrodes with relatively large surfaces. The definite relation between the electric gradient in the nozzle and the quantity of formed vapour confirms the view that evaporation of the electrodes has a considerable influence on the formation of the discharge on the electrodes. There are 9 figures, 1 table and 34 references, 25 of which are English, 3 German, 1 Soviet and 5 Czech.

ASSOCIATION: Ústav technické fysiky ČSAV, Praha (Institute of Technical Physics, Czech Ac.Sc., Prague)

SUBMITTED: February 24, 1958

CZ/37-58-5-4/19

AUTHOR: Hermoch, Vladimír

TITLE: Contribution to the Study of Electrode Areas of High-Intensity Short-Duration Electric Discharges (Příspěvek ke studiu elektrodových prostorů silnoproudých krátkodobých elektrických výbojů)

PERIODICAL: Československý Časopis pro Fysiku, 1958, Nr 5, pp 535-544 (Czech)

ABSTRACT: The author aimed at determining the changes caused by differing degrees of contraction of the discharge canal on electrodes and to evaluate from these changes the causes which bring about contraction and the processes accompanying this phenomenon. This procedure is in accordance with the procedure applied in theoretical work of various authors (Refs 13-22) dealing with the anode or the cathode space and it is also in accordance with earlier published results of the author (Ref 23), namely, that by restricting the size of the active electrode surface it is possible to bring about differing contractions of the discharge canal and thus of the current intensity on the electrodes. As a function of the degree of contraction, the author observed on the one hand the

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Contribution to the Study of Electrode Areas of High Intensity Short Duration Electric Discharges

change in the energy released on the electrodes and, on the other hand, the voltage changes in the spark gap. The energy was determined from its effect on the electrodes, i.e. from the quantity of the material evaporated from the electrodes, paying also attention to the changes in the surface of the electrodes affected by the discharge. Two groups of experiments were made. In both cases the electrode arrangement was such that one of the electrodes (the anode or the cathode) had a strictly delimited active surface. For measuring the impact energy of the carriers, a 6 mm dia. graphite disc was provided which was joined to a copper base and the surface of which was delimited by a durana thick-walled capillary with a differing internal diameter and a ground spherical cavity of such a shape as to fit exactly on the end of the graphite disc (Fig.1a). In the second group of measurements the active surface of the electrode was formed by the face of a rod electrode of 1 to 6 mm dia. sunk into a ceramic substance (Fig.1b). The electrodes

 were on the same axis, made of the same material, whereby

Contribution to the Study of Electrode Areas of High Intensity Short Duration Electric Discharges

the counter electrode was of 4 mm dia. and was provided with a semi-spherical active surface. The discharges were produced by discharging a battery of condensers, whereby the capacitance and the impedance of the discharge circuit were so chosen as to obtain discharges of the desired characteristic under various conditions of contraction. The discharge was initiated according to a method described in earlier work. By using the here mentioned method of artificial contraction, i.e. of increasing the current density by limiting the active surface of the electrodes of a short duration high intensity discharge, the characteristic of the energy released on the electrodes as a function of the current density, and the characteristic of the voltage across the spark gap as a function of the contraction, the material and the polarity of the electrodes were determined. On the basis of the energy equilibrium for both electrodes, taking into consideration the losses occurring as a result of heat conductivity λ to the electrodes, it was found that with increasing contraction on the electrodes, an

Contribution to the Study of Electrode Areas of High Intensity Short Duration Electric Discharges

increase occurs not only in the total voltage but also in the impact energy of the carriers which is transmitted to the electrodes. Whilst the theories which explain the contraction of electrode spaces (Refs 13-17) take into consideration the fact that an increase in the contraction will bring about an increase in the voltage drop in the discharge zone affected by the contraction, they do not take into consideration the fact that with increasing current density the energy release on the electrodes will increase and bring about evaporation of the electrodes. This means that if for steady state arc discharges for which these theories were originally evolved (and for which the results obtained by the author of this paper are applicable) no appreciable evaporation of the electrodes was observed, the current density in these discharges did not reach the order of 10^4 A/cm^2. However, theories relating to high current densities must include the influence of electrode evaporation on the contraction region. The flow of vapours results in an increase of the gradient in the zone which is influenced by the

Contribution to the Study of Electrode Areas of High Intensity Short Duration Electric Discharges

electrode vapours and brings about an increase in the temperature and the electric conductivity and thus also a thermal contraction of the discharge canal on the electrode surface. The relation between the impact energy, the magnitude of contraction and the intensity of evaporation which intensifies contraction will result in a gradual increase of the current density to a certain limit value. This mechanism explains the splitting of canals, the divided spots and their simultaneous existence. The magnitude of the current densities, which occur spontaneously on the electrodes, is governed by the differing intensities of vapour flow which is due to thermal-physical properties of the material as well as various ionisation properties and effective cross sections of the particles of the medium formed by the electrode vapours. In the here described work it was assumed that the carriers form basically by thermal ionisation of the electrode vapours, whereby under normal conditions the cathode is not likely to have an

important part of the electron current and it is to be anticipated that on the average the cathode densities will be about 40% higher than the respective anode densities. The voltage changes across the spark gap during the discharge and its inter-dependence with the current density on the electrode indicates that there is a possibility of a change in the current density as a function of time as well as a function of current intensity. Although in the introductory part of this paper the problems of the electrode spaces were not fully answered, it can be assumed that further study of the electrode spaces (study of the influence of the flow of the vapour of the electrode material) will contribute to elucidating the specific properties of the electrode spaces of this type of discharges.

CZ/37-58-5-4/19

Contribution to the Study of Electrode Areas of High Intensity Short Duration Electric Discharges

There are 6 figures and 33 references, 4 of which are Czech, 2 Soviet, 13 English, 14 German.

ASSOCIATION: Ústav technické fysiky, ČSAV, Praha
(Institute of Technical Physics, Czechoslovak Ac.Sc., Prague)

SUBMITTED: February 24, 1958

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CZECHOSLOVAKIA/Electronics - Electrical Discharges in Gases and Gas Discharge Apparatus. H

Abs Jour : Ref Zhur Fizika, No 12, 1959, 27856

Author : Hermoch, Vladimir

Inst : Institute of Technical Physics, Czechoslovak Academy of Sciences, Prague Czechoslovakia

Title : Vapor Streams of Electrode Materials During a Short-Duration Electric Discharge with Large Current Strength

Orig Pub : Ceskosl. casop. fys., 1958, 8, No 6, 680-689

Abstract : Using a rotating mirror, a study was made of the formation of vapor streams of electrode materials (propagating with velocity $\sim 10^5$ cm/sec). The discharge between cylindrical and plane electrodes was localized with the aid of a plate made of insulating material with a hole, which determined the diameter of

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CZECHOSLOVAKIA/Electronics - Electrical Discharges in Gases and Gas Discharge Apparatus H

Abs Jour : Ref Zhur Fizika, No 12, 1959, 27856

the channel of the discharge. The strength of the discharge current reached several thousands of amperes. The thermal nature of the vapor stream from the electrodes is confirmed (the velocity of the vapor is inversely proportional to the quantity of vapor formed per unit time, and is directly proportional to the energy liberated near the electrodes). A connection is established in this paper between the intensity of the electric field in the discharge channel and the quantity of vapor formed, and this connection indicates the substantial role of evaporation of electrodes in the formation of a discharge of this type. Bibliography, 34 titles. -- G.S. Solutsev

Card 2/2

Electrode spaces of high-current short-duration electric discharges. Vladimir Hermoch (Czechoslov. Acad. Sci., Prague). [illegible] 9, 84-90(1959)(in Russian). —The electrode spaces of high-current short-duration discharges are analyzed by using the method of artificial contraction (limiting the active surface of the electrodes). Evapn. of the electrodes during the discharge can be regarded as one of the main factors causing thermal contraction of the channel on the surface of electrodes and high c. d. on the electrodes, and permitting the independent existence of partial spots. 21 references. A. Kremheller

2 4E3d

The vapor jets of electrode material in a short-time, high-intensity electric discharge. Vladimír Hermoch (Czech. Acad. Sci., Prague). *Czechoslov. J. Phys.* 9, 221-8(1959) (in Russian).—The velocity of vapors from electrodes and the values of the electric gradient of the channel are measured. An explanation is given of the dependence of the discharge rate of the vapors on the electrode material, and the thermal origin of the jets is confirmed. The validity of the results is shown for the case of a different expti. arrangement, or the formation of other types of discharges on electrodes. 12 references. A. Kremheller

Channel of short-time, high-intensity electric discharge. Vladimír Hermoch (Czechoslov. Acad. Sci., Prague). ~~Czechoslov. J. Phys.~~ 9, 377-87(1959)(in Russian).—H. studies the discharge channel and its formation by the spatial expansion of the radial cross section of the channel of the discharge (duration 10^3 μsec and max. intensity smaller than 10^4 amp.) and by measuring some of its elec. properties. 20 references. A. Kremheller

Processes in the electrode spaces of short-time, high-intensity electric discharges. V. Hermach (Czechoslov. Acad. Sci., Prague). *Czechoslov. J. Phys.* 9, 505–11(1959) (in Russian).—H. discusses the conditions for, and the causes of, the interrupted emission of vapors from electrodes during short-time, high-intensity discharges. Previous observations (Bez and Höcker, *CA* 51, 6316c) and new ones are discussed. A. Kremheller

HERMOCH, V.

CZECH/37-59-2-4/20

AUTHOR: Vladimír Hermoch

TITLE: The Channel of a Transient High-current Electric Discharge

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 2, pp 141-149 (+ 2 plates)

ABSTRACT: Transient high-current discharges have recently been studied extensively (Refs 1-10). The influence of the electrode material has, however, been largely neglected. As has been shown in a previous publication by the author, the transient discharge with maximum current up to 10 kA and duration of 10-100 μsec, leads to the intense formation of vapour from the electrode material. This leads to the question how this vapour influences the formation and expansion of the discharge channel. A second important question is the dependence of the main parameters of the channel on the parameters of the discharge. Only some of these relations have been studied (Refs 12, 13). The channel was observed in a chamber for continuous time expansion (Ref 11). The slit of the chamber was placed perpendicular to the longitudinal axis of the discharge in the middle between the two electrodes. The electrodes, made from various materials, were about 6 mm diameter with a spherical end-piece. The electrical

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The Channel of a Transient High-current Electric Discharge

parameters of the discharge were measured by previously described apparatus. The discharge can be divided into several characteristic regions in the axial direction. These are, starting from the cathode, as follows: the cathode space-charge region; the cathode region; the channel; the anode region; and finally, the anode space-charge region. The only way of measuring the potential drop on the channel consists of measurements with varying distances between the electrodes. In spite of errors associated with this method, it is probably preferable to the use of probes (Ref 14). Fig 1a shows the time dependence of the current in the channel and Fig 1b shows the gradients in the channel for one particular instant with varying distances between the electrodes. Fig 2 shows the change in potential as a function of the current of the discharge. By increasing the current, the potential drop increases. This behaviour is entirely different from other types of discharge. Fig 3a shows the time-dependence of the potential drop for electrode distances of 1 and 3 mm. Fig 3b shows the approximate values of the gradients.

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The figure shows that while the current passes through zero, the gradient has a finite value. This contradicts a result obtained for larger electrode distances by the probe method (Ref 13). The dependence of the potential drop on the material of the electrode is only noticeable for small distances between electrodes and not for distances larger than 7-10 mm. Under conditions as above, the formation of the channel was studied by the chamber for continuous time expansion. A typical expansion of the radial cross-section of the channel is shown in Fig 5a (plate, p 222c). Fig 5b shows a phase photograph of an axial cross-section. The intermittent emission of vapour from the electrodes causes an intermittent condensation of vapours in the central part of the channel and thereby a radial expansion of the plasma. While the radial expansion of the plasma for electrodes with low vapour pressure is negligible, it increases with higher vapourisation of the electrodes and reaches a maximum for electrodes made from Pb, Bi, Cd, Zn, etc (Fig 6). The radial velocity was measured for equal discharge currents (Table 1). A typical cross-section of

The Channel of a Transient High-current Electric Discharge

the intensity of radiation from a channel is shown in Fig 7. The channel radiates considerably more than the rest of the discharge. The emission of vapours from the electrodes contributes to the thermal contraction of the channel. This is shown by the changes in the axial conductivity of the channel with varying distances between the electrodes. The intense flow of vapours contributes to the depletion of the channel of ions. The thermal flow into the electrodes from the regions near the electrodes, causes losses which also contract the channel. The time-dependence of the discharge shows considerable influence of the vapours from the electrodes. It is likely that these vapours replace the original gas in the discharge.

Card 4/4 There are 8 figures, 1 table and 20 references, of which 10 are Soviet, 4 English, 3 Czech and 3 German.

ASSOCIATION: Ústav technické fysiky ČSAV, Praha
(Inst. Tech. Physics, Czech Ac. Sc., Prague)

SUBMITTED: February 24, 1958

Z/037/60/000/005/022/056
E192/E382

AUTHOR: Hermoch, V.

TITLE: The Anode Region in a Short-time High-intensity Electric Discharge

PERIODICAL: Československý časopis pro fysiku, 1960, No. 5, p. 411

TEXT: The processes occurring at the anode during the formation of the discharge were investigated. The relationship between the physical characteristics of the electrode material and the contraction of the anode region was investigated. The anode region is characterised by the current density in the anode spot and the energy of the electric current carriers. The investigation was done for several elements which were used as the electrode materials. The energy corresponding to the thermal flux to the electrodes and the rate of the evaporation from the spots were determined for these materials. The carrier concentration as a function of temperature and the average electrical continuity of the plasma were also measured. A hypothesis

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E192/E382

The Anode Region in a Short-time High-intensity Electric Discharge

concerning the reasons for the contraction of the anode space is put forward; this was checked experimentally.

ASSOCIATION: Ústav technické fysiky ČSAV, Praha (Institute of Technical Physics of the ČSAV, Prague)

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L 15503-63 EWT(1)/BDS AFFTC/ASD Z/0055/63/013/005/0321/0326
ACCESSION NR: AP3003613

54
51

AUTHOR: Hermoch, V.

TITLE: On the formation of the anode space of a short-time high-intensity electric discharge

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 13, no. 5, 1963, 321-326

TOPIC TAGS: electric discharge, anode, anode spot, thermal conductivity, anode property, high intensity discharge, plasma

ABSTRACT: The formation of anode spots (i.e., their shape, number, and current density) during short-duration, high-intensity electric discharges has been studied by a new method, using anodes of tin, copper, or tin-coated copper. This makes it possible to evaluate the effect of the thermal conductivity of the anode on spot formation in discharges with identical anode material and type of plasma. The experiments were conducted with prismatic anodes (10 x 10 x 50 mm) made of tin, copper, and copper coated with 0.01- and 0.1-mm-thick tin layers. Aperiodic discharge pulses of 6×10^2 to 4×10^5 amp maximum intensity were generated by battery discharge. A tungsten rod was used as cathode. The

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anode spots were recorded by frame photography at an exposure of 5×10^{-6} sec. The current density was calculated from the measured surface area and the instantaneous current intensity. The results show that with a tin anode the current density does not change with changing current intensity; with a copper anode it changes with current intensity; and with the tin-coated copper anode the current density depends both on the thickness of the tin layer and the current intensity. The 0.01-mm-thick tin layer vaporized at currents larger than 1000 amp. The current density of 3.26×10^4 amp/cm^2 observed with the 0.1-mm-thick tin layer was higher than those obtained on the pure copper or tin anodes. The discharge region on this anode was characterized by a large number of isolated circular spots. It is concluded that the constriction of the anode region is affected not only by the type of plasma but also by the thermophysical properties of the anode material. "In conclusion the author would like to thank J. Chudoba and B. Grycz for valuable remarks."

ASSOCIATION: Ustav fyziky pevnych latek CSAV, Prague (Institute of Solid-State Physics, Czechoslovak Academy of Sciences)

SUBMITTED: 29Jun62 DATE ACQ: 12Jun63 ENCL: 00
SUB CODE: PH NO REF SOV: 000 OTHER: 004

Card 2/2

L 18795-63 EWT(l)/EWP(q)/EWT(m)/BDS/ES(w)-2 AFFTC/ASD/ESD-3/IJP(C)/SSD
Pab-4 RH/JD/JG/AB
ACCESSION NR: AP3003614 Z/0055/63/013/005/0327/0334

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73

AUTHOR: Hermoch, V.

TITLE: The anode space of short-time, high-intensity electric discharges

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 13, no. 5, 1963, 327-334

TOPIC TAGS: electric discharge, high intensity discharge, anode, anode spots, anode evaporation, plasma, tin cor r anode

ABSTRACT: A theoretical study was made to determine the effect of anode evaporation on the discharge mechanism in the anode region during short-duration electric discharges. The evaporation rate (atoms/unit area), the weight flow of vapors, the specific electric conductivity of the plasma formed, the heat flux from the surface into the interior of the anode, and the current density were calculated for 17 metals and carbon on the basis of a simplified energy balance on the surface of the anode. Tabulated values of these quantities showed that 14 elements (e.g., Fe, Al) have almost identical evaporation

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L 18795-63
ACCESSION NR: AP3003514

rates. C, Ta, W, and Mo, however, had considerably lower evaporation rates but higher heat fluxes. These results suggest that two types of constriction of the anode region exist. One is caused by the cooling action of the vapor flow and is characterized by high current densities and multiple discharge spots. The other is caused by cooling of the plasma in contact with the relatively cold anode surface. Thermal pinch occurs in both cases. The plasma conductivity of all considered elements, with the exception of carbon, did not differ substantially and therefore cannot have a marked effect on the configuration of the anode region. "In conclusion the author thanks J. Chudoba and B. Grycz for valuable remarks." Orig. art. has: 3 formulas, 1 figure, and 1 table.

ASSOCIATION: Ustav fyziky pevnych latek, CSAV, Prague (Institute of Solid-State Physics, Czechoslovak Academy of Sciences)

SUBMITTED: 29Jun62 DATE ACQ: 12Jun63 ENCL: 00
SUB CODE: PH NO REF SOV: 000 OTHER: 011

Card 2/2

HERMOCH, Vladimir; GRAKOV, Valerij

Magnetooptic shutters. Ces cas fys 13 no.6:463-469 '63.

1. Ustav fysiky pevnych latek, Ceskoslovenska akademie, Praha (for Hermoch). 2. Beloruska statni universita, katedra experimentalni fysiky, Minsk (for Grakov).

L 18292-63 EWT(1)/EWP(q)/EWT(m)/BDS/EEC(b)-2/ES(w)-2 AFFTC/ASD/
ACCESSION NR: AP3003674 AFWL/IJP(C)/SSD Pab-4 z/0055/63/013/007/0509/0517
JD

AUTHOR: Grakov, V., V. Hermoch

TITLE: Behavior of cathode spots in heavy electric discharge

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 13, no. 7, 1963, 509-517

TOPIC TAGS: cathode spot, two type metal, Al positive ion, boiling surface, metal type

ABSTRACT: Object of the study was the aperiodic discharge of a condenser under atmospheric pressure: capacitance 105 microF, inductivity 30 microH, resistance 0.3 Ohms; tension on condenser 600 V; duration of discharge 180 microsec, maximum strength of current 400 A. The existance of cathode spots of 2 types was discovered. Those on Mn, Cu and Al, marked by rapid movement toward fresh sections of the electrode, apparently appear on all metals. If the autoelectronic mechanism of the emission from the cathode is assumed, their behavior may be explained thus: when the surface irregularities of the metal have been melted away and its crystal structure destroyed by the positive ions resulting

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L 18292-63
ACCESSION NR: AP3003674

3

from bombardment, the electron emission within the spots diminishes. This causes the center of the emission to pass to the neighboring sections with increased emission capacity, and ultimately the whole spot to be transferred there. The movement of the spot along the electrode consists of a whole series of such shifts. Those of the second type, on Zn, Cd and Sn, have low mobility and occur only on metals with low thermophysical constants of the local boiling points of the cathode. They result because increased concentration of metal vapor under the boiling surface augments the ionizing action of the primary electrons. The consequent attachment of the spots of the second type to the centers of evaporation is responsible for their low mobility. It seems unlikely that the indicated subdivision of metals according to the behavior of the cathode spots on them was a subdivision upon the electric parameters of the discharge. Further experiments must clarify this question.
Orig. has 1 figure.

ASSN: (1) Chair of Experimental Physics of the Belorussian State University;
(2) Inst. of Physics of Solid Bodies, Sz AS.

Card 2/2

HANMOCH, V.

The anode space of short-time high intensity electric discharges. Czechosl fiz zhurnal 13 no.5:327-334 '63.

1. Ustav fysiky pevnych latek, Ceskoslovenska akademie ved, Praha.

CZECHOSLOVAKIA

HERMOCHOVA, S., and POKORNA, V., Chair of Psychology (Katedra psychologie), Faculty of Philosophy (Filosoficka fakulta), Charles University Prague.

"New Methods of Work With Delinquents in the USA"

Prague, Ceskoslovenska Psychiatrie, Vol LIX, No 4, August 63, pp 282-284.

Abstract: All information are taken from American sources, especially from publications of the Association for Psychiatric Treatment of Offenders.

1/1

L 34149-66
ACC NR: AP6026046 SOURCE CODE: CZ/0034/66/000/003/0226/0226

AUTHOR: Bastecky, V.; Petlicka, J. (Engineer); Hermova-Rosova, E.; Srbkova, V.

ORG: none

TITLE: Method for an economical treatment of solutions containing metal ions by means of ion exchangers

SOURCE: Hutnicke listy, no. 3, 1966, 226

TOPIC TAGS: ion exchange, metallurgy

ABSTRACT: The article is a summary of Czechoslovak Patent Application Class 40a, 9/02,40a, 47/00, PV 2792-64, dated 14 May 64. The invention is suitable preferentially for the treatment of highly concentrated solutions, such as may be found in treatment of ores, concentrates, slag, or chemicals, where a limitation of the recirculated liquid is an advantage. The basis of the invention consists in producing solutions at various levels of concentration, at recirculating them at suitable levels in a closed cycle, or using them for other purposes. [JPRS: 36,646]

SUB CODE: 07,11/ SUBM DATE: none

Card 1/1

[illegible], M.; [illegible], A.

"Correct Delimitation of Agricultureal and Forest Soils", p. 597, (ZA SOCIALISTICKE ZEMEDELSTVI, Vol. 4, No. 6, June 1954, Praha, Czechoslovakia,

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

ZASMETA, Vitezslav, prof. inz.; HERMUTH, Bedrich, inz.

Evaluation of poplar and willow tree plantations. Les cas 10 no.8:701-704 Ag '64

1. Faculty of Forestry, Higher School of Agriculture, Brno (for Zasmeta). 2. Ministry of Agriculture, Forestry and Water Resources Management, Prague (for Hermuth).

HERNAD, Sandor

From the life of the Hungarian State Railways airclub. Repules 16 no.5:18 My '63.

HERNAD, Sandor

Aviation news. Repules 16 no.6:18 Je '63.

HERNAD, Sandor

Aviation news. Repules 16 no.8:18 Ag '63.

HERNAD, Sandor

From the life of the Dozsa Aeroclub. Repules 16 no.10:18 O '63.

HERNAD, Sandor

From the life of the parachute section of the GANZ-MAVAG Air Club. Repules 16 no.7:18 Jl '63.

HERNAD, Sandor

Life of the parachutists of the Postal Workers' Aviation Club of the Hungarian Sports Federation for Defense. Repules 16 no.12:18 D '63.

HERNAD, Sandor

From the life of the Hungarian Sports Federation for Defense parachutists in Fejer County. Repules 17 no.1818 Ja'64.

HERNAD, Sandor

Parachutists of the aeroclub of the Hungarian State Railways.
Repules 18 no.2:18 F '65.

BARTA, L.:HERNADI, A.

The effect of desoxycorticosterone on the function of the kidney. Gyermekgyogyaszat 3 no. 10:302-310 Oct 1952. (CLML 23:5)

1. Doctor. 2. First Pediatric Clinic (Director -- Prof. Dr. Pal Gegesi Kiss), Budapest Medical University.

HERNADI, Alajos

Strain measurements in Portugal's concrete dams. Vizugyi kozl no.4:538-540 '61.

HERNADI, F.; CSOBAN, Gy.; MAK[illegible]

The radiation sensitivity of Escherichia coli [illegible]. ..
Physiological factors influencing radiation sensitivity.
Acta microbiol. acad. sci. Hung. 11 no.2:89-105 [illegible]

1. Pharmakologisches Institut (Direktor: T. Valyi-Nagy) der Medizinischen Universitat Debrecen.

HORVATH, Eva, Dr.; VACZI, Lajos, Dr.; SZABO, Gabor, Dr.; HERNADI, Ferenc, Dr.

Effect of antibiotic combinations on Pseudomonas pyocyanea strains. Orv. hetil. 100 no.15:541-544 12 Apr 59.

1. A Debreceni Orvostudomanyi Egyetem Mikrobiologiai Intezetenek (igazgato: Vaczi Lajos dr. egy. tanar) es Gyogyszertani Intezetenek (igazgato: Valyi-Nagy Tibor dr. egy. tanar) kozlemenye.

(PSEUDOMONAS AERUGINOSA, eff. of drugs on antibiotics in various combinations (Hun))

(ANTIBIOTICS, eff. on Pseudomonas aeruginosa strains, eff. of various antibiotic combinations (Hun))

[redacted], jr., A.; PALYI, I.; HERNADI, F.; VALYI-NAGY, T.

Search for antagonistic actinomycetae in Hungarian soils. V. Effects of fermentation liquids in various in vitro tumour tests. Acta biol. acad. sci. Hung. 14 no.2:103-109 '63.

1. Institute of Pharmacology (Head: T. Valyi-Nagy), Medical University of Debrecen, Research Institute for Oncopathology (Head: B. Kellner), Budapest, and Department of Antibiotics (Head: T. Valyi-Nagy), Research Institute of Experimental Medicine, Hungarian Academy of Sciences (Director: I. Rusznyak).
(ACTINOMYCETES) (SOIL MICROBIOLOGY)
(STREPTOMYCES) (CARCINOMA, EHRLICH TUMOR)
(ANTINEOPLASTIC AGENTS)

HERNADI, F.; KOVACS, P.; KULCSAR, G.; VALYI-NAGY, T.

Search for antagonistic actinomycetae in Hungarian soils.
VI. The effects of background radiation on Streptomycetes.
Acta biol. acad. sci. Hung. 14 no.2:111-121 '63.

1. Antibiotics Department (Head: T. Valyi-Nagy), Research Institute of Experimental Medicine (Director: I. Rusznyak) of the Hungarian Academy of Sciences and Institute of Pharmacology (Head: T. Valyi-Nagy), Medical University of Debrecen.
(SOIL MICROBIOLOGY) (STREPTOMYCES)
(ANTIBIOTICS) (RADIATION EFFECTS)
(ANTINEOPLASTIC AGENTS) (MYCOBACTERIUM)
(BACILLUS SUBTILIS)

VALYI-NAGY, Tibor (Debrecen 12, Gyogyszertan, Hungary); HERNADI, Ferenc (Debrecen 12, Gyogyszertan, Hungary); JENEY, Andras (Debrecen 12, Gyogyszertan, Hungary)

Search for antagonistic actinomycetae in Hungarian soils. I. Antagonistic streptomyces contents of certain kinds of soil. Acta biol Hung 12 no. 1: 59-67 '61.

1. Antibiotics Department (Head T. Valyi-Nagy), Institute of Experimental Medicine (Director: I. Rusznyak) of the Hungarian Academy of Sciences, and Institute of Pharmacology (Head: T. Valyi-Nagy) Medical University, Debrecen.

VALYI-NAGY, Tibor (Debrecen 12, Gyogyszertan, Hungary); HERNADI, Ferenc (Debrecen 12, Gyogyszertan, Hungary); JENEY, Andras (Debrecen 12, Gyogyszertan, Hungary); VALU, Gabriella (Debrecen 12, Gyogyszertan, Hungary)

Search for antagonistic actinomycetae in Hungarian soils. II. Studies of the streptomyces flora in defined geographical region. Acta biol Hung 12 no.1:69-82 '61.

1. Antibiotics Department (Head: T. Valyi-Nagy), Institute of Experimental Medicine (Director: I. Rusznyak) of the Hungarian Academy of Sciences, and Institute of Pharmacology (Head: T. Valyi-Nagy) Medical University of Debrecen.

*

HERNADI, F.; RENCZ, A.; JENEY, A.; VALYI-NAGY, T.

A microbiological method for the study of radioprotective substances.
Kiserl. orvostud. 13 no.6:613-617 D '61.

1. Debreceni Orvostudomanyi Egyetem Gyogyszertani Intezete es I sz. Sebeszeti Klinika Rontgen Osztalya.

(RADIATION PROTECTION) (MICROBIOLOGY)

HERNADI, F.; NAGY, Zs.; JENEY, A.; VALYI-NAGY, T.

Use of nitrogen mustards for the biological determination of values of radioactive substances. Acta physiol. acad. sci. hung. 20 no.4: 421-427 '61.

1. Pharmakologisches Institut der Medizinischen Universitat, Debrecen.

(NITROGEN MUSTARDS) (RADIOISOTOPES)

HUNGARY

HERNADI, Ferenc MD of the Institute of Pharmacology (Gyogyszertani Intezet) of the Debrecen College of Medicine (Debreceni Orvostudomanyi Egyetem).

"Chemical Radioprotective Agents. I."

Budapest, Orvosi Hetilap, Vol 103, No 47, 25 Nov 62; pp 2222-2226.

Abstract: A review article discussing chemical compounds that are able to prevent or reduce the development of radiation reaction, as well as increase the resistance of the organism to radiation when present in the body prior to the irradiation. The most effective radioprotective compounds may be divided into the following groups: 1.Cyanides and nitriles (Example: KCN, malonic acid dintrile); 2. Sulfhydryl compounds (cystamine); 3. Amines (adrenaline, histamine); 4.Hormones (oestrogens); 5. Anoxia producers (barbiturates, CO); 6. Chelate builders (diethyldithiocarbamate) and 7. Metabolites and neutral substances (fructose, fluoroacetate). Methods for the evaluation of radioprotective agents are also discussed. [99 references, predominantly Western].

1/1

ACCESSION NR: AT4022937 H/2501/63/014/002/0111/0121

AUTHOR: Hernadi, Ferenc; Kovacs, Peter; Kulcsar, Gabor; Valyi-Nagy, Tibor

TITLE: Search for antagonistic Actinomycetae in Hungarian soils. VI. The effects of background radiation on Streptomycetes

SOURCE: Academia scientiarum hungaricae. Acta biologica, v. 14, no. 2, 1963, 111-121

TOPIC TAGS: streptomycete, radioactive soil, biological effect, chronic radiation, radiation - genetic effect, radiation - biological effect, antibiotic spectrum, Pridham grouping, sporophore, antitumor activity, culture medium

ABSTRACT: Twenty Streptomyces strains, isolated from radiactive soil were compared with twenty strains from inactive soil, to determine the biological effects of chronic radiation (high level radiation of 8-10 millimicrocuries, over a period of many generations). Thirty-five different culture media were used -- each in quadruplicate. Information on pigment production and certain biochemical processes was obtained, but no essential difference was noted in the strains from the radioactive and the normal soils. No significant differences were observed in the antibiotic spectra, the anti-tumor activity, or the radioprotective effects. The following

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ACCESSION NR: AT4022937

distribution of Pridham's groups was noted under microscopic examination of sporophores of 89 "radioactive" strains: I. 85.4%; II. 12.4%; III. 2.2%. These sporophores were longer and straighter than any previously seen ones. Among sporophores of 145 control strains the distribution was: I. 26.3%; II. 57.2%; III. 15.2%; IV. 0.7%; V. (VI, VII). 0.7%. Group I. is regarded by Pridham as of the lowest evolutionary level among these groups. Electron micrographs did not disclose differences between the radioactive and the control strains. Orig. art. has: 10 microphotographs, 2 graphs, 1 table.

ASSOCIATION: Antibiotics Department of the Research Institute of Experimental Medicine of the Hungarian Academy of Sciences; Institute of Pharmacology of the Debrecen Medical University

SUBMITTED: 08Feb63 DATE ACQ: 08Apr64 ENCL: 00

SUB CODE: AM NO REF SOV: 000 OTHER: 013

Card 2/2

SUMMARY

[illegible], Jeno, M.D., of the Institute for Pharmacology at the Medical University (Orvostudomanyi Egyetem Gyogyszertani Intezete) in Debrecen.

"Radiomimetic Substances"

Budapest, Orvosi Hetilap, Vol 104, No 7, 17 Feb 1963, pp. 307-311.

Abstract: The author reviews the history, chemistry, effects, properties, and application of radiomimetic substances on the basis of seventy literature references (10 German, 1 Russian, and 59 Western.

1/1

HUNGARY

HERMADI, Ferenc, M.D., and VALYI-NAGY, Tibor, M.D., of the Institute for Pharmacology at the Medical University (Orvostudomanyi Egyetem Gyogyszertani Intezete) in Debrecen.

"The Role of Antibiotics in the Treatment of Acute Radiation Syndrome"

Budapest, Orvosi Hetilap, Vol 104, No 20, May 19, 1963, pp. 913-917.

Abstract: In this summarizing article, 27 recent references in the medical literature were briefly reviewed. The radiation syndrome is caused by the decreased resistance of the body (especially the myelopetical system), the decreased phagocytal activity of the tissues in the liver, spleen, and mesenchyma, and the increase in tissue permeability. The effects of various antibiotics were discussed. Twenty-seven references, including 3 German, 2 Hungarian, and 22 Western.

1/1

HERNADI, Ferenc, dr.; NAGY, Zsolt, dr.

Chemical radiation-protective agents II. Orv. hetil. 106 no.29: 1369-1375 18 Jl'65.

1. Debreceni Orvostudomanyi Egyetem, Gyogyszertani Intezet.

HUNGARY

HERNADI, Ferenc, NAGY, Zsolt, KOVACS, Peter, and MUCSI, Otto, Institute of Pharmacology (Director: VALYI-Nagy, T.) and X-Ray Clinic (Director: JONA, G.) at the Medical University [original-language version not given] in Debrecen.

"The Radiation-Sensitivity of Escherichia Coli B-Cultures. Part 2: The Effect of Treatment Prior to, In the Course of, and Following Irradiation on the Radiation-Sensitivity of the Cells"

Budapest, Acta Microbiologica Academiae Scientiarum Hungaricae, Vol 13, No 1, 2 Jun 1966, pp 1-11.

Abstract: [German article] The sensitivity of Escherichia coli B-cultures to X-ray and Co-60 radiation was investigated both before and after irradiation and as a function of temperature and anoxia. The sensitivity was decreased by employing minimum nutrient media, especially in conjunction with metabolism-inhibitors such as chloramphenicol. Increased temperatures increased the radiation-sensitivity, especially in the lower dose ranges. Anoxia, caused by nitrogen being bubbled through the culture, reduced radiation-sensitivity. 22 references, including 1 Hungarian, 1 German, and 20 Western. (Manuscript received 8 Nov 1965).

1/1

HUNGARY

HERNADI, Ferenc, NAGY, Zsolt, KOVACS, Peter, and VALYI-NAGY, Tibor, Institute of Pharmacology at the Medical University [original-language version not given] in Debrecen (Director: VALYI-NAGY, T.).

"The Radiation-Sensitivity of Escherichia Coli B-Cultures. Part 4: Dependence of the Protective Effect of Cysteine-Cysteamine-Type Compounds on Pre-Irradiation Oxygenation and on Pre- and Post-Irradiation Conditions of Culturing"

Budapest, Acta Microbiologica Academiae Scientiarum Hungaricae, Vol 13, No 1, 2 Jun 1966, pp 13-20.

Abstract: [English article] Incubation of Escherichia coli B-cultures with cysteine-cysteamine-type compounds before or after irradiation increased the sensitivity of the cells to X-ray irradiation to about the same degree as did anoxic control. The effect of these compounds was physico-chemical prior to and metabolic following irradiation. The metabolic state of the culture, which depends on pre-irradiation conditions, determines principally the degree of radiation-sensitivity. 18 references, including 1 Russian, 5 Hungarian, 1 German, and 11 Western. (Manuscript received 21 Sep 1965).

1/1

HUNGARY

NAGY, Zsolt, HERNADI, Ferenc, and KOVACS, Peter, Institute of Pharmacology at the Medical University [original-language version not given] in Debrecen (Director: VALYI-NAGY, T.).

"The Radiation-Sensitivity of Escherichia Coli B-Cultures. Part 6: Effect of Cysteine on DNA Breakdown by Ionozing Radiation"

Budapest, Acta Microbiologica Academiae Scientiarum Hungaricae, Vol 13, No 1, 2 Jun 1966, pp 21-24.

Abstract: [English article] The post-irradiation effect of cysteine in the radiation-induced DNA breakdown and colony-forming ability of Escherichia coli B-cultures was investigated by establishing the number of surviving cells. DNA breakdown was inhibited by 0.1 - 0.01 M cysteine; 0.001M concentration was ineffective. No direct correlation was evident between DNA content and viable count. The phenomenon is non-specific and similar to that observed in concentrated solutions of various other substances. When cysteine inhibited the breakdown of DNA, the viable count remained the same or showed a slight increase only. The effect of cysteine is due to a post-irradiation effect of unknown mechanism. 10 references, including 2 Hungarian and 8 Western. (Manuscript received 12 Apr 1965).

1/1

HUNGARY

L 00697-67 T JK

ACC NR: AF6035476 SOURCE CODE: HU/0028/66/013/001/0001/0011

HERMADI, Ferenc, MAGY, Zsolt, KOVACS, Peter, and MACSI, Otto, Institute of Pharmacology (Director: VALYI-Nagy, T.) and X-Ray Clinic (Director: JUHA, G.) at the Medical University [original-language version not given] in Debrecen.

"The Radiation-Sensitivity of Escherichia Coli B-Cultures. Part 2: The Effect of Treatment Prior to, In the Course of, and Following Irradiation on the Radiation-Sensitivity of the Cells"

Budapest, Acta Microbiologica Academiae Scientiarum Hungaricae, Vol 13, No 1, 2 Jun 1966, pp 1-11.

Abstract: [German article] The sensitivity of Escherichia coli B-cultures to X-ray and Co-60 radiation was investigated both before and after irradiation and as a function of temperature and anoxia. The sensitivity was decreased by employing minimum nutrient media, especially in conjunction with metabolism-inhibitors such as chloramphenicol. Increased temperatures increased the radiation-sensitivity, especially in the lower dose ranges. Anoxia, caused by nitrogen being bubbled through the culture, reduced radiation-sensitivity. Orig. art. has: 9 figures. [JPRS: 36,834]

TOPIC TAGS: bacteria, x ray, cobalt, irradiation, radiation biologic effect, anoxia, chloromycetin
SUB CODE: 06 / SUBM DATE: 08Nov65 / ORIG REF: 001 / OTH REF: 021
Card 1/1 mjs

0921 2194

L 00698-67 EWT(m)/T JK

ACC NR: AP6035477 SOURCE CODE: HU/0028/66/013/001/0013/0020

HERNADI, Ferenc, NAGY, Zsolt, KOVACS, Peter, and VALYI-NAGY, Tibor, Institute of Pharmacology at the Medical University [original-language version not given] in Debrecen (Director: VALYI-NAGY, T.).

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B

"The Radiation-Sensitivity of Escherichia Coli B-Cultures. Part 4: Dependence of the Protective Effect of Cysteine-Cysteamine-Type Compounds on Pre-Irradiation Oxygenation and on Pre- and Post-Irradiation Conditions of Culturing"

Budapest, Acta Microbiologica Academiae Scientiarum Hungaricae, Vol 13, No 1, 2 Jun 1966, pp 13-20.

Abstract: [English article] Incubation of Escherichia coli B-cultures with cysteine-cysteamine-type compounds before or after irradiation increased the sensitivity of the cells to X-ray irradiation to about the same degree as did anoxic control. The effect of these compounds was physico-chemical prior to and metabolic following irradiation. The metabolic state of the culture, which depends on pre-irradiation conditions, determines principally the degree of radiation-sensitivity. Orig. art. has: 6 figures. [JPRS: 36,834]

TOPIC TAGS: bacteria, x ray irradiation, radiation biologic effect

SUB CODE: 06 / SUBM DATE: none

Card 1/1mjs

0921 2195

L 00701-67 T JK

ACC NR: AP6035478 SOURCE CODE: HU/0028/66/013/001/0021/0024

NAGY, Zsolt, HERNADI, Ferenc, and KOVACS, Peter, Institute of Pharmacology at the Medical University /original-language version not given/ in Debrecen (Director: VALYI-NAGY, T.).

28
B

"The Radiation-Sensitivity of Escherichia Coli B-Cultures. Part 6: Effect of Cysteine on DNA Breakdown by Ionozing Radiation" 19

Budapest, Acta Microbiologica Academiae Scientiarum Hungaricae, Vol 13, No 1, 2 Jun 1966, pp 21-24.

Abstract: [English article] The post-irradiation effect of cysteine in the radiation-induced DNA breakdown and colony-forming ability of Escherichia coli B-cultures was investigated by establishing the number of surviving cells. DNA breakdown was inhibited by 0.1 - 0.01 M cysteine; 0.001M concentration was ineffective. No direct correlation was evident between DNA content and viable count. The phenomenon is non-specific and similar to that observed in concentrated solutions of various other substances. When cysteine inhibited the breakdown of DNA, the viable count remained the same or showed a slight increase only. The effect of cysteine is due to a post-irradiation effect of unknown mechanism. Orig. art. has: 3 figures. [JPRS: 36,834]

TOPIC TAGS: bacteria, DNA, radiation biologic effect
SUB CODE: 06 / SUBM DATE: 12Apr65 / ORIG REF: 002 / OTH REF: 008

Card 1/1 mjs

0921 2196

[illegible], Cz.; [illegible], Gy.

"Newer Explanation for the Change of Cutting Pressure", p. 459, (GÉP, Vol. 6, No. 10, October 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3, March 1955, Uncl.

HERNADI, GY.

The March decision and the innovators' movement, p. 3, UJITOK LAPJA, (Orszagos Talamanyi Hivatal) Budapest, Vol. 7, No. 6, Mar. 1955

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 4, No. 12, December 1955

HERNADI, GY.

Conference of Soviet scientists and innovators of the machine industry, p. 5, UJITOK LAPJA, (Orszagos Talamanyi Hivatal) Budapest, Vol. 7, No. 6, Mar. 1955

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 4, No. 12, December 1955

HERNADI, GY.

"Possibilities of increasing the output of twist drills."

p. 231 (Gep) Vol. 9, no. 6, June 1957
Budapest, Hungary

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

HERNADI, Lajos, villamosmernok

Direct-current low-voltage switchgears. Villamosmag 10 no.6:162-174 Je '62.

1. Transzformator es Villamoskeszulekgyar.

HERNADI, Magda

Old-age pensioners. Hung TU no.3:14-15 Mr '65.

HERNADI, Magda

Dr. Palma Szeki, doctor of technical sciences. Ujit lap 13 no.17:9 S '61.

(Szeki, Palma)
(Scientists, Hungarian)

HERNADI, Magda

The experimental copy of the first Hungarian "Hangos Ujsag" (Sound Journal) has been published. Ujit lap 13 no.18:13 S '61.

(Talking books) (Hungary--Newspapers)

HERNADI, Magda

Mrs. Istvan Zeisel, a chemist at the Goldberger Textile Works, has become an outstanding innovator. Ujit lap 15 no.5:7 10 Mr '63.

HERMADI, Magda

Back to his native land from Canada; from the life of Janos Toth, one-time Canadian farmer. Hung TU no.11:12-13 N '63.

H[illegible]NA I, ...

HERNADI, S.

"Help Given by Soviet Technical Literature and Technical Information", P. 25, (TOBBTERN ELFS, Vol. 8, No. 6, June 19[illegible]4, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

HERNADI, Sandor

Word abbreviations. Elet tud 15 no.4:102 24 Ja '60.

HERMADY, Alajos, oklevelos mernok, tudomanyos munkatars

Operational conditions of automatic irrigation headwater regulators. Vizugyi kozl no.1:80-84 '63.

1. Vizgazdalkodasi Tudomanyos Kutato Intezet.

HERNADY, Aiajos, mernok, fomernok; STAROSOLSZKY, Odon, mernok

Field investigation at Tiszalok barrage. Vizugyi kozl no.3:377-414 '64.

1. Scientific Division Chief, Scientific Research Institute of Water Resources Development, Budapest (for Starosolcszky).

TALLIAN, F.; PUSKAS, E.; HERNADY, A.; SZEGEDY, L.; TOMKA, I.

Fetal injuries in forceps delivery. Acta chir. acad. sci. Hung. 6 no.4:353-364 '65.

On the effect of breech presentation on the fetus. (Results of follow-up studies). Ibid.:375-383

1. II. Frauenklinik (Direktor: Prof. Dr. I. Zoltan), I. Kinderklinik (Direktor: Prof. Dr. P. Gegesi-Kiss), Psychiatrische Klinik (Direktor: Prof. Dr. Gy. Nyiro) der Medizinischen Universitat und Landesinstitut fur Neurochirurgie (Direktor: Dr. L. Zoltan), Budapest. Submitted November 25, 1964.

HUNGARY

ZSEBOK, Zoltan, Dr. HERNADY, Tibor, Dr. Hungarian Academy of Sciences, Medical-Radiological Research Group (MTA -- Magyar Tudomanyos Akademia -- Orvos-Radiologiai Kutatocsoport), and Medical University of Budapest, Radiological Clinic (director: ZSEBOK, Zoltan, Dr, professor) (BOTE -- Budapesti Orvostudomanyi Egyetem -- Radiologiai Klinika).

"Study of the In-Vitro Radiation Sensitivity of Red Blood Cell Catalase."

Budapest, Magyar Radiologia, Vol XVIII, No 2, Apr 66, pages 68-71.

Abstract: [Authors' English summary modified] The results of experiments with erythrocyte-catalase irradiation are reported. On the basis of the results it is concluded that there is no direct radiation damage to red blood cell catalase in the course of treatment of patients or in the doses most frequently used for irradiation in animal experiments. Some fundamental concepts are discussed with respect to the "dilution effect" observed in the course of experimental irradiation and to the phenomenon of dosage-dependent radiation sensitivity. 1 Hungarian, 16 Western references.

1/1

RADIOLOGY

HUNGARY

HERNADY, Dr Tibor, and KENEZ, Dr Jozsef, Radiological Clinic (Radiologiai Klinika) of the College of Medicine (Orvostudomanyi Egyetem), Budapest (Director of Clinic: Prof Dr Zoltan ZSEBOK).

"The Role of the Reduction of the Minute Dose and of the Grid Method in Radiation Therapy"

Budapest, Magyar Radiologia, Vol 18, No 6, Dec 66; pp 348-356.

Abstract [Authors' English summary]: On the basis of the experiments reported in the literature it is pointed out by the authors that in the orthovolt X-ray therapy, in the case of fractionation, the reduction of the minute dose does not play a part because the low dose effect necessary for the increase in the electivity of the radiation effect is practically unrealizable. The theoretical and practical problems related to grid irradiation are discussed and the importance of this method is emphasized. 82 References, mainly Western.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618010019-5"

NEUROLOGY

HUNGARY

PALVOLGYI, Richard, Dr, HERNADY, Tibor, Dr; Medical University of Budapest, Radiological Clinic (director: ZSEBOK, Zoltan, Dr, professor) (Budapesti Orvostudomanyi Egyetem, Radiologiai Klinika).

"The Technique of Gamma Encephalography and Its Place in Neurological Diagnostics."

Budapest, Ideggyogyaszati Szemle, Vol XIX, No 4, Apr 66, pages 117-125.

Abstract: [Authors' Hungarian summary] Following an introductory paragraph on general physical considerations, the technique of GEG, using ^{131}I-labelled serum albumin (RISA), is described. A discussion of the advantages and limitations of the method is followed by a description of those cases in which reliable information can be expected from a GEG examination. 2 Hungarian, 12 Western references.

HERNICZEK,B: KOZUSZNIK,K: WINIEWSKI,J

A Polish separator for coal preparation. .64

PRZEGLAD COCNICZY. (Stowarzyszenie Naukowo-Techniczne Inzynierow i Techników Gornictwa) Katowice, Poland
Vol.15, no.1/2 Jan./Feb. 1959

Monthly list of East European Accessions (EEAI) LCc Vol.8, no.7 July 1959

Uncl.

HERNICZEK, Bohdan, mgr.,inz; KOZUSZNIK, Karol, inz.

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